

CLAIMS

What is claimed is:

1. A data structure, comprising a parent node and a plurality of children nodes of the parent node arranged in an order, wherein:

the parent node comprises:

a first pointer to a child node that was last queried;

each child node comprises:

a second pointer to a next child node in the order; and

a third pointer to a previous child node in the order.

2. The data structure of claim 1, wherein the parent node further comprises a fourth pointer to a first child node in the order and a fifth pointer to a last child node in the order.

3. A data structure, comprising a parent node and a plurality of children nodes of the parent node arranged in an order, wherein:

the parent node comprises:

a first pointer to one the children nodes; and

a second pointer to another one of the children nodes;

each child node comprises:

a third pointer to a next child node in the order; and

a fourth pointer to a previous child node in the order.

4. The data structure of claim 1, wherein the parent node further comprises a fifth node to a child node that was last queried.

5. The method of claim 5, wherein the first pointer points to a first child node in the order and the second pointer points to a last child node in the order.

6. A method for generating a data structure comprising a parent node and a plurality of children nodes of the parent node, the method comprising:

creating the parent node with:

a first pointer to one of the children nodes; and

a second pointer to another one of the children nodes;

creating each child node with:

a third pointer to a next child node in the order; and

a fourth pointer to a previous child node in the order.

7. The method of claim 6, further comprising creating the parent node with a fifth pointer to a child node that was last queried.

8. The method of claim 6, wherein the first pointer points to a first child node in the order and the second pointer points to a last child node in the order.

9. A method for querying a data structure comprising a parent node and a plurality of children nodes of the parent node in an order, comprising:

following a first pointer in the parent node to one of the children nodes; and

following a second pointer in said one of the children nodes to another one of the children nodes.

10. The method of claim 9, wherein the first pointer points to a first child node in the order.

11. The method of claim 9, wherein the first pointer points to a last child node in the order.

12. The method of claim 9, wherein the second pointer points to a next child node in the order.
13. The method of claim 9, wherein the second pointer points to the previous child node in the order.
14. The method of claim 9, wherein the first pointer points to a child node last queried.
15. The method of claim 14, further comprising updating the first pointer to point the child node last queried.